

Frequently asked questions (FAQ) about X-rays and radiation

What is an X-ray?

An X-ray exam is a medical test that uses a small amount of radiation to see inside your body. All equipment at The Ottawa Hospital that uses radiation is tested regularly to make sure they are safe for patients.

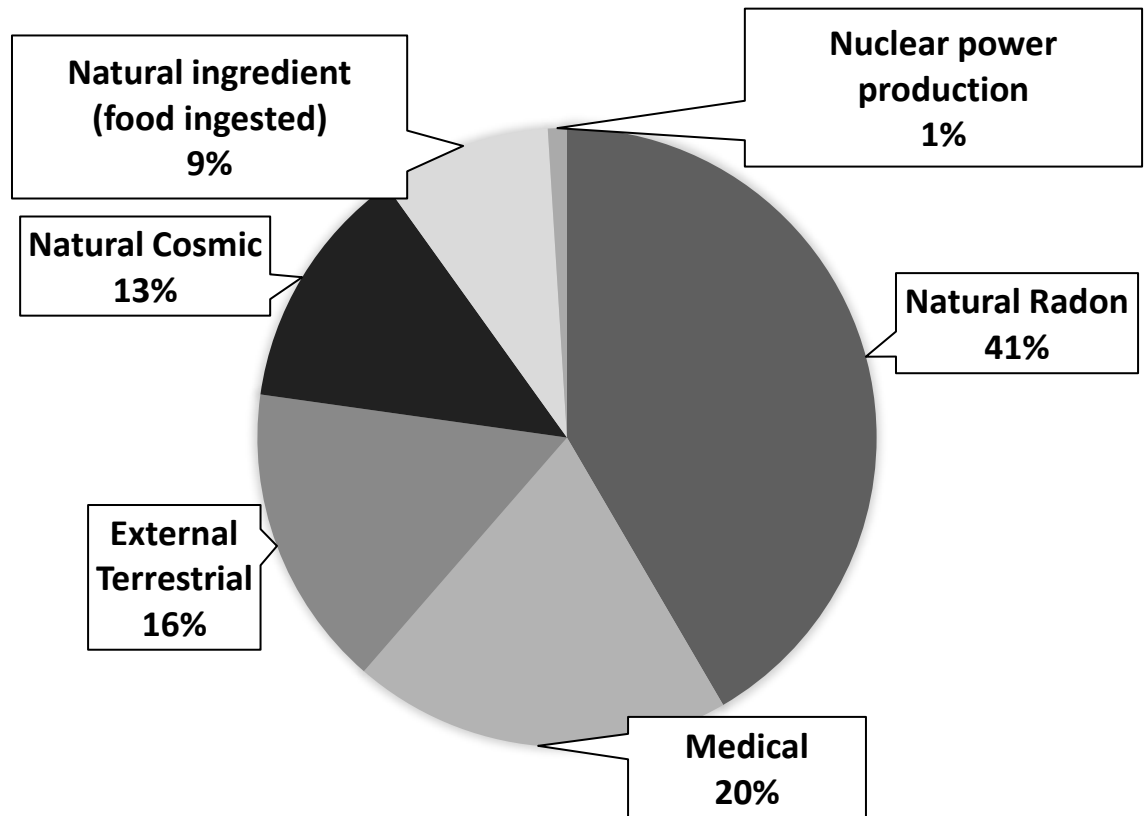
Should I get an X-ray?

X-rays can be an important part of your care. They can be used to see inside your body without the need for some surgeries or other tests to help your doctor know how best to care for you. Your doctor will only suggest you get an X-ray if they believe it is justified given the benefits provided from the X-ray. The Ottawa Hospital staff are trained to use X-ray machines safely.

What is radiation?

Radiation is a form of energy that travels through the air and may be able to pass through materials like skin and muscle. When radiation passes through your body, some of it gets absorbed. This happens during X-ray exams, but also every day, since the Earth, the sun, the food we eat and water we drink naturally give off low levels of radiation. In fact, most people absorb more radiation from natural sources than they do from any other source. This is commonly referred to as background radiation.

SOURCE OF RADIATION TO WHICH AN INDIVIDUAL IS EXPOSED TO IN EVERYDAY LIFE



[Source](#)

What tests use radiation?

In addition to X-rays, radiation is also used in tests such as CT scans, Fluoroscopy and Nuclear Medicine.

Does radiation from an X-ray cause cancer?

Research suggests the amount of radiation used in diagnostic X-rays and other medical imaging procedures does not increase the risk of getting cancer.

How much radiation does an X-ray give?

Staff use the smallest amount of radiation needed to do the X-ray. This is called the "As Low As Reasonably Achievable" (ALARA) principle.

How much radiation you get during an X-ray (your “dose”) depends on a few things:

- the type of X-ray you got
- your size, and
- the area of your body being X-rayed

What other precautions can I take?

1. Tell your doctor or staff using the X-ray machine if you are pregnant or think you might be pregnant.
2. Ask your doctor why you need an X-ray.
3. Ask your doctor if there are other tests they can do instead.

The millisievert (mSv) is the standard unit used to measure radiation dose. Below is a sample of typical doses from some common medical procedures. For comparison, a person living in the Ottawa area gets a radiation dose from natural sources of 2 to 3 mSv per year.

Procedure	Approximate effective radiation dose	Comparable to natural background radiation for:
Computed Tomography (CT)–Abdomen and Pelvis	10 mSv	3 years
Computed Tomography (CT)–Colonography	6 mSv	2 years
Computed Tomography (CT)–Head	2 mSv	8 months
Computed Tomography (CT)–Spine	6 mSv	2 years
Computed Tomography (CT)–Chest	7 mSv	2 years

Barium Enema (Lower GI X-ray)	8 mSv	3 years
Upper GI Study with Barium	6 mSv	2 year
Chest X-ray	0.1 mSv	10 days
Spine X-ray	1.5 mSv	6 months
Extremity (hand, foot, etc.) X-ray	0.001 mSv	3 hours
Mammography	0.4 mSv	7 weeks
Bone Densitometry (DEXA)	0.001 mSv	3 hours
Positron Emission Tomography–Computed Tomography (PET/CT)	25 mSv	8 years

[Source](#)